REMARKS

This is a full and timely response to the outstanding final Office Action mailed July 15, 2005. Claims 1 - 14 remain pending. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

In the Specification

The Office Action indicates that the specification is objection to because it contains an embedded hyperlink and/or other form of browser-executable code. As set forth above, Applicants have amended the specification and respectfully assert that the objection has been accommodated.

Rejections Under 35 U.S.C. §112

The Office Action indicates that claims 1 and 11 stand objected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Applicants have respectfully traverse the rejection. In this regard, Applicants respectfully assert that the limitation of:

> . . .if processing of a second processing job is requested during a time period that includes any remaining portion of the deferral period and the estimated processing time of the first processing job, an option of reserving a second deferred start time for deferred processing of the second job is provided, the second deferred start time occurring after an estimated completion time for deferred processing of said first processing job. . .

is described in the specification in a manner that satisfies the requirements of 35 U.S.C. §112, first paragraph. Specifically, the first paragraph of page 37 discloses:

> In a further approach the user is provided an option of reserving a deferred start time for the deferred processing of user's processing job. If the user opts to reserve a deferred start time, then the user sets the deferred start time and user's job is stored, for example in a hard disk when the production device is a printer. *In some implementations*

> *setting the deferred start time includes avoiding time periods when the production device is unavailable, for example due to a previous reservation.*

(Emphasis added).

Clearly, setting of a deferred start time to avoid time periods when the production device is unavailable must necessarily include avoiding "a time period that includes any remaining portion of the deferral period and the estimated processing time of the first processing job" because the production device would be unavailable during those time periods. Moreover, there is no limitation present in the disclosure on the number of processing jobs that can have deferred start times, thus, recitation of a second deferred start time is fully supported. Therefore, Applicants respectfully request that the rejections be withdrawn.

Claim Rejections - 35 U.S.C. § 103(a)

The Office Action indicates that claims 1, 4 and 11 - 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Teng* in view of *Shah*. The Office Action further indicates that claims 2 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Teng* in view of *Shah* as applied to claim 1, and further in view of *Ban*; and that claims 3, 5, and 6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Teng* in view of *Shah* as applied to claim 1, and further in view of *Duke*. Additionally, the Office Action indicates that claims 7-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Teng* in view of *Shah* in view of *Duke* as applied to claim 6 above, and further in view of *Fan*; and that claims 13-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Teng* in view of *Shah* as applied to claim 1, and further in view of *Fan*. Applicants respectfully traverse the rejections.

With respect to *Teng*, Applicants respectfully agree with the contention of the Office Action indicating that *Teng* does not teach if processing of a second processing job is requested during a time period that includes any remaining portion of the deferral period and the estimated processing time of the first processing job, an option of reserving a second deferred start time for deferred processing of the second job is provided, the second deferred start time occurring after an estimated completion time for deferred processing of said first processing job, as generally recited in claims 1 and 11. However, Applicants respectfully disagree with the contention that *Shah* teaches such features.

With respect to *Shah*, that reference generally involves:

> a scheduling scheme that uses an estimated rasterization execution time (RET) to improve the productivity of printers, particularly color printers. Because print jobs have different levels of complexities, a longer RET may be require for some jobs than for others. For example, a print job which includes color graphics, color print, different font changes or a variety of style formats such as, italic, bold and other styles, will have a longer RET than a simple black and white print job. *If a print job is pre-scanned to estimate the RET before the print job arrives at the printer, it is possible to schedule those print jobs with a shorter RET ahead of those print jobs with a longer RET, thus improving productivity of the printer.*

(*Shah*, Abstract). (Emphasis added).

Additionally, Shah discloses:

> Since the majority of print jobs fall into the simple category, users are frustrated with waiting for complex jobs to finish which were submitted ahead of their jobs. Therefore, *to balance the functions between the ESS and the IOT, the present invention uses a two queue approach. For example, the print jobs which require a minimum amount of time for the ESS to process, i.e., the simple jobs, are placed in one queue, e.g., a simple queue, and the print jobs which are more complex and time consuming for the ESS are placed in a second queue, e.g., a complex queue. The print jobs which are in the simple queue are ripped and printed first, even if these print jobs arrive after the complex jobs, and then the print jobs in the complex queue are processed.* This reduces the IOT idle time which significantly improves the wait time for simple print jobs.

A print driver, preferably located in the workstation, pre-scans a document and takes the document file and converts it into a postscript (page description language, PDL) print ready file. Additionally, the print driver attaches a header to the file. The header will identify the complexity level of the document file, including whether the file is color or black and white, e.g., simple or complex. The printer, or print server, will read the header information and, based on the header information, schedules the print jobs by placing the document file into an appropriate queue, e.g., a simple queue or a complex queue. *Print jobs in the simple queue will have a higher priority than print jobs in the complex queue.*

The two queue approach is for simplicity purposes. *Alternatively, a single queue can be used in which the jobs are arranged in ascending order of their RET estimates. The jobs with the smallest RET estimates will be ripped and printed first.*

(*Shah*, column 1, line 64 through column 2, line 29). (Emphasis added).

Clearly, *Shah* involves estimation of processing times of print jobs.

As indicated in the Office Action, *Shah* also teaches:

FIG. 4 shows a flowchart outlining one exemplary embodiment of the method for scheduling documents in a networked printer environment in accordance with the systems and methods of the invention. As shown in FIG. 4, the process begins in step S100, and continues to step S110, where the system, during a PDL conversion scan, estimates the rasterization execution time (RET) for the document. Next in step S120, the system places the RET estimate in a file header. Then, in step S130, the system sends the PDL converted document with the file header to a print scheduler, such as a print server. Control then continues to step S140.

In step S140, the system develops a custom priority scheme based on the file header. *The custom priority scheme allows a user to override any RET generated priority. For example, if a user has an important color print job with a long RET, the custom priority scheme will allow this particular print job to be advanced before other prints jobs, regardless of their RET.* The custom priority scheme will look at the RET estimates and any override flags that may be set and schedule jobs accordingly. Then in step S150, the system schedules the documents for printing in an increasing order of their RET estimates. *Simple jobs will normally go first and complex jobs thereafter, unless a priority override is in place.*

(*Shah*, column 4, lines 41 - 64). (Emphasis added).

Thus, *Shah* does teach that an override can be used to alter the print priority.

However, *Shah* additionally discloses the following:

> In step S160, *if no priority override flag is in place, the system prints documents with the shortest RET first.* Control then goes to step S170, where the control process ends.

(*Shah*, column 4, lines 65 - 67). (Emphasis added).

Although *Shah* permits the print priority based on RET to be overridden, absent such an override, *Shah's* system prints documents with the shortest RET first.

That is, *Shah* teaches a specific print priority scheme that can be overridden.

However, Applicants' claims recite a patentably distinct priority scheme, as is described in detail below.

In this regard, claim 1 recites:

> 1.   A method of relieving competition between processing jobs sharing a production device, said method comprising:
> a.   accessing from a user's browser a destination service representing at least one production device;
> b.   retrieving said user's imaging information by said destination service;
> c.   selecting among production options provided by said destination service for determining a first processing job to process said imaging information using said at least one production device;
> d.   estimating the time duration required to process said first processing job using said at least one production device with said selected production options;
> e.   providing said user an option of reserving a start time for deferred processing of said first processing job using said at least one production device in accordance with said selected production options; and
> f.   if said user opts to reserve a start time, then setting a first deferred start time, storing said first processing job during a deferral period until said first deferred start time occurs, and then deferred processing said first processing job using said production device in accordance with said selected production options such that, *if processing of a second processing job is requested during a time period that includes any remaining portion of the deferral period and the estimated processing time of the first processing job, an option of reserving a second deferred start time for deferred processing of the second job is provided, the second deferred start time occurring after an estimated completion time for deferred processing of said first processing job.*

(Emphasis added).

Applicants respectfully assert that the cited references, either individually or in combination, fail to teach or reasonably suggest at least the features/limitations emphasized above in claim 1. In particular, although *Shah* uses RET's to establish a printing priority for print jobs, *Shah* does not contemplate the use of multiple deferred start times, much less deferred start times that are established in the manner recited above. Additionally, none of the other references or combinations thereof teach or reasonably suggest this feature either. Therefore, Applicants respectfully assert that claim 1 is in condition for allowance. Insofar as claims 2 - 10 are dependent claims that incorporate the features of claim1, Applicants respectfully assert that these claims also are in condition for allowance. Additionally, these claims recite other features that can serve as an independent basis for patentability.

With respect to claim 11, that claim recites:

> 11.   A destination service representing a production device, said destination service operable to:
> download content into a browser;
> retrieve first imaging information;
> select, under user interactive control via said content, from among production options for processing said first imaging information using said production device;
> estimate the time duration required to process said first imaging information using said production device in accordance with said selected production options;
> provide an option of reserving a first deferred start time for deferred processing of said first imaging information; and
> if a first deferred start time is reserved, interactively determine said first deferred start time and implement deferred processing of said first imaging information in accordance with said selected production options such that, *if processing of a second processing job using said production device is requested and processing of the second processing job cannot be completed by the production device prior to the first deferred start time of the first processing job, an option of reserving a second deferred start time for deferred processing of the second processing job is provided, the second deferred start time occurring after the estimated completion time for deferred processing of said first processing job.*

(Emphasis added).

Applicants respectfully assert that the cited references, either individually or in combination, fail to teach or reasonably suggest at least the features/limitations emphasized above in claim 11. In particular, although *Shah* uses RET's to establish a printing priority for print jobs, *Shah* does not contemplate the use of multiple deferred start times, much less deferred start times that are established in the manner recited above. Additionally, none of the other references or combinations thereof teach or reasonably suggest this feature either.

Therefore, Applicants respectfully assert that claim 11 is in condition for allowance. Insofar as claims 12 - 14 are dependent claims that incorporate the features of claim 11, Applicants respectfully assert that these claims also are in condition for allowance. Additionally, these claims recite other features that can serve as an independent basis for patentability.

Cited Art of Record

The cited art of record has been considered, but is not believed to affect the patentability of the presently pending claims.

CONCLUSION

Applicants respectfully submit that Applicants' pending claims are in
condition for allowance. Favorable reconsideration and allowance of the present
application and all pending claims are hereby courteously requested. If, in the opinion
of the Examiner, a telephonic conference would expedite the examination of this matter,
the Examiner is invited to call the undersigned attorney at (770) 933-9500.
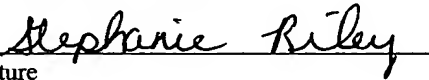
Respectfully submitted,

M. Paul Qualey, Jr., Reg. No 43,024

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Alexandria, Virginia 22313-1450, on

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Stephanie Riley

Signature

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